

Folic Acid Activity
VOCABULARY CONCENTRATION

Objective: (SWBAT: Student Will Be Able To)

SWBAT: Identify vocabulary words with their definitions

SWBAT: State the relationship of the word to folic acid

Materials Needed:

- Vocabulary words printed on separate 8 1/2 x 11 paper
- Each vocabulary definition printed on a separate sheet of paper
- Numbers

Advance Set-Up

Mix up the definitions and the vocabulary words. Tape each paper upside down to a blackboard or wall with the word or definition toward the wall. Place a number on each paper.

Time needed for activity: 15 – 45 minutes

Procedure:

Step #1 – Introduction of the vocabulary session emphasizing the importance of folic acid. In 1992 the U.S. Public Health Service recommended that women of childbearing age increase consumption of the vitamin folic acid to reduce spina bifida and anencephaly. In 1996 the U.S. Food and Drug Administration mandated that all enriched cereal grain products be fortified with folic acid no later than January 1998. Folate is a B vitamin compound that is important for many metabolic processes in the body and is used in the manufacture of neurotransmitters (chemical messengers in the brain) in preventing heart disease and for synthesizing DNA. Folate is best found in avocado, bananas, orange juice, asparagus, fruits, green, leafy vegetables, dried beans and peas. The synthetic form, folic acid, is now added to commercial grain products. To understand the importance of folic acid, it is important to understand the vocabulary associated with this consequential vitamin.

Step #2 – Have the students look up the following words or give them the definitions to study. **(Click on each word to view it (page 1) and it's definition (page 2)).**

1. [Birth defect](#) – a birth defect is a problem that happens while a baby is developing inside the mother. Most birth defects happen during the first 3 months of pregnancy.
2. [Embryo](#) – An unborn baby from the beginning of pregnancy through the first 8 weeks
3. [Spinal cord](#) – A long tube of nerve tissue inside the bony spinal column, running from the brain down the length of the back. It controls movement and feeling.
4. [Neural tube defect \(NTD\)](#) - Problems in the growth of the spinal cord and brain in an embryo, when the neural tube does not close at the top (anencephaly) or the bottom (spina bifida). The defects occur in the first month of pregnancy, before most women know they are pregnant.

5. [Anencephaly](#) – A fatal birth defect that happens when the neural tube does not fully close at the top. As a result, the skull and brain do not form properly. Babies with anencephaly die before or shortly after birth.
6. [Encephalocele](#) – A birth defect that is often fatal. Part of a baby's skull does not form properly, and part of the brain is outside of the skull. Those babies who do survive often have severe physical and mental handicaps.
7. [Spina bifida](#) – A birth defect of the backbone and spinal cord that leaves the spinal cord exposed.
8. [DNA – Deoxyribonucleic acid](#). A large nucleic acid molecule, found principally in the chromosomes of the nucleus of a cell, that is the carrier of genetic information in living cells.
9. [Folate](#) – A water-soluble vitamin of the B-complex group. Folate is the form of the vitamin found naturally in foods.
10. [Folic Acid](#) – The synthetic form of the B-vitamin, folate. Folic acid is used in vitamin supplements and fortified foods. Folic acid (or folate) is a water-soluble vitamin of the B complex group essential for cell growth and reproduction.
11. [Hydrocephalus](#) – A pathological condition characterized by an abnormal accumulation of cerebrospinal fluid in the brain – “Water on the brain”.

Step #3 – After the students have the definitions, a fun way to review and reinforce the definitions is to play vocabulary concentration. Divide the class into two teams. A student calls out a number, and whatever is behind that number is read aloud. Then the group needs to decide what word/definition they need to find. The group calls a second number. If the word/definition completes the first pick, those two are taken down and the group gets to continue calling numbers until a match is not made. Continue until all matches are made.

Step #4 – Closing – As a review, have students stand around the room displaying their word and the definition that goes with that word. Have the students read aloud the word and its definition.

Note:

- When this exercise is used as a learning exercise, allow the students to use their vocabulary sheets. When this exercise is used as a review or preparation for a test, do not allow the students to use any papers. This way it helps the students identify what they need to study further.
- Also do not allow the students to write down the number for a definition/word when it is exposed on the concentration game. Part of the learning process and fun is concentrating on where the definition and words are located. Suggest to the students that certain team members be designated to remember specific words/definitions. This helps create team responsibility and working together to accomplish a goal.

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